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ATTORNEYS AT LAW

Docket No.: 0583-0252-0 FWC DIV

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

RE: Application Serial No.: 08/813,950
Applicants: Manfred ASSMUS, et al.
Filing Date: March 3, 1997
For: THERMOPLASTIC COATING AND BINDING AGENT FOR MEDICINAL FORMS
Group Art Unit: 1712
Examiner: Sellers, R.

SIR:

Attached hereto for filing are the following papers:

Appeal Brief w/Appendix (In Triplicate)

Our check in the amount of **$330.00** is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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DOCKET NO: 0583-0252-0 FWC DIV

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
MANFRED ASSMUS ET AL	: EXAMINER: SELLERS, R.
SERIAL NO: 08/813,950	:
FILED: MARCH 3, 1997 CPA FILED: DECEMBER 26, 2002	: GROUP ART UNIT: 1712
FOR: THERMOPLASTIC COATING AND BINDING AGENT FOR MEDICINAL FORMS	:

APPEAL BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal of the Final Rejection dated December 1, 2003 of Claims 25-29. A Notice of Appeal was timely filed on March 1, 2004.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Roehm GmbH & Co. KG having an address at Darmstadt Kirschenallee, D-64293, Darmstadt, Germany.

II. RELATED APPEALS AND INTERFERENCES

This application was the subject of Appeal No. 2000-1405 on claims different from those pending herein. Appellants, Appellants' legal representative and the assignee are otherwise aware of no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF THE CLAIMS

Claims 25-29 stand rejected and are herein appealed. Claims 1, 3, 5, 7, 9, 11, 13 and 15, the remaining claims in the application, stand withdrawn as being directed to a non-elected invention.

IV. STATUS OF THE AMENDMENTS

No amendment under 37 CFR 1.116 has been filed.

V. SUMMARY OF THE INVENTION

As recited in Claim 25, the present invention is an oral or dermal medicinal composition containing a pharmaceutical active substance and a thermoplastic coating and binding agent prepared by a method of applying a thermoplastic coating and binding agent in a hot-melt liquid state at a temperature of 100-150°C to said oral or dermal medicinal composition, followed by cooling to solidify the thermoplastic coating and binding agent, wherein said thermoplastic coating and binding agent consists essentially of a mixture of, based on 100% by weight of A and B:

A) a thermoplastic acrylic plastic with a melting temperature above room temperature and below 200°C, a glass transition temperature below 120°C, and a melt viscosity of 1,000 to 1,000,000 Pa-sec at the melting temperature; and

B) 20-50 wt.% of glycerol monostearate, wherein the glass transition temperature of the mixture is no more than 20°K below the glass transition temperature of component A.

See the specification at page 5, line 12 through page 6, line 2; the sentence bridging pages 6 and 7; page 13, lines 15-16; and page 15, lines 10-13.

VI. ISSUES

Whether Claims 25-29 are unpatentable under 35 U.S.C. § 103(a) over:

(A) the article *Drugs Made in Germany* (Petereit et al)[1]?

(B) U.S. 5,707,646 (Yajima et al)?

(C) U.S. 5,603,957 (Burguiere et al) in view of U.S. 5,552,159 (Mueller et al)?

(D) U.S. 5,858,412 (Staniforth et al) in view of Mueller et al?

(E) JP 51-91317 (JP '317), U.S. 5,484,608 (Rudnic et al), and U.S. 5,695,784 (Pöllinger et al) in view of Petereit et al, Burguiere et al and Mueller et al?

(F) Mueller et al in view of Petereit et al and Burguiere et al?

VII. GROUPING OF THE CLAIMS

Claim 29 stands or falls separately from Claim 25.

VIII. ARGUMENT

As recited in Claim 25, the present invention is an oral or dermal medicinal composition containing a pharmaceutical active substance and a thermoplastic coating and binding agent prepared by a method of applying a thermoplastic coating and binding agent in a hot-melt liquid state at a temperature of 100-150°C to said oral or dermal medicinal composition, followed by cooling to solidify the thermoplastic coating and binding agent, wherein said thermoplastic coating and binding agent consists essentially of a mixture of, based on 100% by weight of A and B:

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[1] The Examiner had been rejecting the claims over an English abstract of Petereit et al. In a response filed February 2, 2004, Applicants submitted a copy of an English translation of the full text of Petereit et al. Since the Advisory Action, dated February 11, 2004, refers to the Petereit et al "article," it is assumed that the Examiner is relying on the full text thereof in the rejections.

A) a thermoplastic acrylic plastic with a melting temperature above room temperature and below 200°C, a glass transition temperature below 120°C, and a melt viscosity of 1,000 to 1,000,000 Pa-sec at the melting temperature; and

B) 20-50 wt.% of glycerol monostearate, wherein the glass transition temperature of the mixture is no more than 20°K below the glass transition temperature of component A.

The following discussion applies to all the above rejections.

The Declaration under 37 C.F.R. § 1.132 of named co-inventor Manfred Assmus, filed June 21, 1999 (first Assmus Declaration), and the Supplemental Declaration of Assmus, filed October 5, 1999 (supplemental first Assmus Declaration), demonstrate the significance of a number of the above-recited limitations.

The first Assmus Declaration demonstrates that the combination of a thermoplastic acrylic plastic within the terms of component A, combined with amounts of glycerol monostearate (GMS), now component B, in amounts from 20 to 80 wt% of GMS, based on the combination of components A and B, when heated to a temperature of 60°C, 65°C, or 80°C respectively, does not produce an (absolutely) clear and homogeneous melt, such as obtained with a temperature of at least 100°C, as required by the present claims. In addition, the first Assmus Declaration shows that the properties of the product produced, and thus the product itself, changes both by the relative amount of GMS present and the temperature at which the thermoplastic coating and binding agent is applied. The supplemental first Assmus Declaration shows how the heating temperature for, *inter alia*, 50% GMS and 80% GMS, affects the structure of the polymer particles produced. The results show no interaction between the GMS, which acts as a flow improver, and the polymer at 65°C; the beginning of interaction at 100°C; and strong interaction at 150°C.

The above-discussed data could not have been predicted by the applied prior art.

In the Office Actions, the Examiner refers to findings by the Board of Patent Appeals and Interferences (Board) in the aforementioned Appeal No. 2000-1405 regarding the First Assmus Declaration and the Supplemental First Assmus Declaration. However, those findings were with regard to claimed subject matter different from that claimed herein, and different prior art rejections from those made herein. The Board obviously has made no findings regarding the presently-claimed invention or the present rejections.

The Examiner finds that "[t]he melt-mixing temperature of 65°C is not representative of the closest prior art value of 100°C for [Yajima et al, discussed *infra*] (cols. 5-7, Examples 4, 7 and 13) . . . wherein the 100°C value is within the claimed range of from 100-150°C."

In reply, by simply picking out temperatures from Yajima et al, the Examiner ignores other disclosure therein that put these temperatures in context. At any rate, to the extent an inventor is required to show unexpected results over prior art, that prior art must actually exist. *E.g.*, *In re Geiger*, 815 F.2d 686, 689, 2 USPQ2d 1276, 1279 (Fed. Cir, 1987) (Newman, J., concurring) ("The applicant is not required to create prior art, nor to prove that his invention would have been obvious if the prior art were different than it actually was"); *In re Chapman*, 357 F.2d 418, 422, 148 USPQ 711, 714 (CCPA 1966) (Requiring applicant to compare claimed invention with polymer suggested by the combination of references relied upon in the rejection of the claimed invention under 35 U.S.C. 103 "would be requiring comparison of the results of the invention with the results of the invention.")

Thus, the Examiner may not ignore other relevant disclosures in Yajima et al, as part of the Examiner's burden to consider the subject matter *as a whole*, as required by 35 U.S.C. § 103.

Issue (A)

The rejection of Claims 25-29 under 35 U.S.C. § 103(a) as unpatentable over Petereit et al, is respectfully traversed. Petereit et al discloses fast disintegrating controlled release tablets from coated particles, wherein the coating is provided with aqueous dispersions of methacrylic acid and methacrylic ester copolymers, including various Eudragit brand products. Petereit et al further discloses the admixture of 25-50% of tableting excipients and other components. Under the second "IT", GMS is listed among a relatively large number of materials, including various Eudragit brand materials.

The Examiner has interpreted the above-discussed disclosure in Petereit et al, from the English abstract thereof, as inclusive of pharmaceutical particles coated with a Eudragit brand copolymer and from 25-50% of GMS. Applicants respectfully disagree with the Examiner's interpretation. The complete Petereit et al article demonstrates that the Examiner's interpretation is incorrect. Indeed, Petereit et al neither discloses nor suggests a coating containing 25-50% by weight of GMS. Petereit et al discloses GMS in amounts much smaller than the presently-recited amounts. Specifically, GMS is listed under 2.1.2. *Excipients*. In Table 1, GMS is used in Examples 5, 7 and 9 with various Eudragit brand products, wherein the number, such as 30D, refers to a dispersion with the numerical polymer content, as described in 2.1.3. *Film formers*. However, in Table 1, the "Dry lacquer substance" is shown, meaning that the GMS concentration per total Eudragit brand polymer is 8.8% in Example 5; 3.3% in Example 7, and 3.0% in Example 9. In addition, Petereit et al is concerned with spray coating formulations, not hot melt preparations.

In the Advisory Action, the Examiner points to the disclosure at page 7, lines 3 [sic, 5] – 10 of Petereit et al, which states that "an amount of less than 20% of excipients will result in a strong increase of initial dose, caused by damage of coatings on the particles [4]. Obviously, the amount of excipient must be so high that a separating layer is formed also

around the surfaces of the coated particles, to prevent adhesion or even confluence of the coatings."

In reply, the Examiner equates the term "excipients" with GMS. However, GMS is only one possible, and not a necessary, excipient, nor does Petereit et al as a whole disclose or suggest GMS as the only excipient. Indeed, the above-discussed Examples suggest that GMS, if present, is present in an amount significantly below the presently-recited minimum of 20 wt%.

Claim 29 is separately patentable, since Petereit et al neither discloses nor suggests the composition according to Claim 25, wherein GMS is present in an amount at least as high as 33.3 wt.%, based on 100% by weight of A and B.

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

Issue (B)

The rejection of Claims 25-29 under 35 U.S.C. § 103(a) as unpatentable over Yajima et al, is respectfully traversed. Yajima et al discloses a taste masking pharmaceutical composition obtained by melting a substance having a low melting point under heat at a temperature equal to or higher than the melting point thereof, dispersing or dissolving a functional polymer compound in the resultant molten substance to form a composition, melt- or heat-granulating the composition and an unpleasantly tasting basic drug to form a complex and incorporating sugar alcohol and basic oxide to the complex (column 2, lines 25-37). Yajima et al lists various Eudragit brand polymers as the functional polymer (column 2, lines 59-61), and GMS as among preferred substances having a low melting point (column 3, lines 5-6). Yajima et al further discloses that the amount of the functional polymer in the complex is 1-60% by weight, and that the amount of the complex in the composition is 20-60% by

weight. While Yajima et al discloses further the percentages of other ingredients, no percentage range is described for the low melting point substance. The Examiner particularly relies on Examples 4, 7 and 13, all of which describe the combination of Eudragit E and GMS. However, in Examples 4, 7 and 13, the percentage of GMS, based on the total amount of GMS and Eudragit E, is 600/700 × 100, or about 86%. Without the present disclosure as a guide, there would have been no motivation to adjust the relative amounts of GMS and Eudragit E in Yajima et al so that the amount of GMS is present as 20-50% by weight of the combination. Nor could one skilled in the art have arrived at the presently-recited requirement that the glass transition temperature of the mixture of thermoplastic acrylic plastic and GMS be no more than 20°K below the glass transition temperature of the thermoplastic acrylic plastic *per se*, or have predicted the importance of both the hot-melt temperature and relative amounts of GMS present, as demonstrated in the above-discussed first Assmus Declaration and supplemental first Assmus Declaration. While the Examiner holds that it would have been obvious to employ the GMS of Yajima et al within the presently-recited range "for low levels of the drug," no nexus is evident in Yajima et al regarding relative amounts of low melting point substance and functional polymer compound vis-à-vis the amount of drug.

In the Final Office Action, the Examiner makes certain calculations from Example 4 of Yajima et al, and finds that the GMS amount is 23%. However, it is clear that this amount is based on the **entire** mixture prior to fluidized granulation with water, described therein, rather than a percentage based on the combination of GMS and the Eudragit material alone. Indeed, it is quite clear from Example 4 that 600 g of GMS are mixed with 100 g of Eudragit. Thus, the Examiner's calculation of 23% is both incorrect and irrelevant.

In the Advisory Action, the Examiner concedes that the correct percentage of GMS in Example 4 is, in essence, about 86%. The Examiner then performs calculations based on the

broadest percentage ranges disclosed for the components of Yajima et al's composition, and noting that no percentage range is described for the low melting substance, which may be GMS, the Examiner finds that the GMS in Yajima et al necessarily is present in an amount of 0.2% to 88.9% which, the Examiner further finds, embraces the presently-recited range of 20-50% by weight.

In reply, since Yajima et al requires that the functional polymer compound be dispersed or dissolved in, in essence, the low melting point substance, such as GMS, it seems rather preposterous that the functional polymer would be present in an amount at least equal to, if not greater than, the amount of the low melting point substance. Indeed, the amounts in the above-discussed Examples strongly support this argument.

Claim 29 is separately patentable, since Yajima et al neither discloses nor suggests the composition according to Claim 25, wherein GMS is present in an amount at least as high as 33.3 wt.%, based on 100% by weight of A and B.

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

Issue (C)

The rejection of Claims 25-29 under 35 U.S.C. § 103(a) as unpatentable over Burguiere et al in view of Mueller et al is respectfully traversed. Burguiere et al discloses controlled-release microcapsules of acetylsalicylic acid, containing a coating which is obtained from a coating composition comprising at least one film-forming polymer insoluble in the gastrointestinal environment (column 5, lines 44-45), such as a Eudragit brand polymer (column 6, lines 7-13), in an amount of 60-85% by weight (column 5, line 56); at least one water-soluble polymer; at least one solid lubricating filler; and at least one hydrophobic plasticizer, which may be a stearate of a glycol such as glycerol (column 6, lines 33-36),

which plasticizer is present in an amount of 2-20, preferably 5-15, wt% (column 5, line 60). Burguiere et al further discloses that their microcapsules are obtained by a process consisting essentially of preparing the coating composition components by mixing them in a solvent system, applying the mixture to particles of acetylsalicylic acid, drying the resulting microcapsules, and if appropriate, mixing the latter with at least one anti-caking agent (column 7, lines 14-21). Mueller et al discloses a solid depot drug form comprising a pharmaceutical active ingredient and a polymer melt comprising at least one water-insoluble poly(meth)acrylate with a glass transition temperature in the range from -60° to 180°C such as a Eudragit brand polymer, and either a particular water-soluble hydroxyalkyl cellulose or hydroxyalkylmethyl cellulose or an N-vinylpyrrolidone polymer.

While Mueller et al discloses a solid depot drug form produced by melt extrusion at from 50° to 200°C, Mueller et al discloses and suggests nothing with regard to the presently-recited requirement of a hot-melt liquid state at a temperature of 100-150°C, nor the presently-recited GMS, nor the presently-recited requirement that the glass transition temperature of the mixture of thermoplastic acrylic plastic and GMS be no more than 20°K below the glass transition temperature of the thermoplastic acrylic plastic *per se*.

Without the present disclosure as a guide, one skilled in the art would not have combined Burguiere et al and Mueller et al. Nor could one skilled in the art have predicted the importance of both the hot-melt temperature and relative amounts of GMS present, as demonstrated in the above-discussed first Assmus Declaration and supplemental first Assmus Declaration.

In the Final Office Action, the Examiner simply relies on the findings of the Board. However, as discussed above, the Board made no findings with regard to this rejection or the present claims. Why would one skilled in the art make the controlled-release microcapsules

of Burguiere et al any differently from the process disclosed therein, there being no evidence or suggestion that Burguiere et al's process is unsatisfactory?

In the Advisory Action, the Examiner finds that when the film-forming polymer of Burguiere et al is Eudragit RL and RS, and the plasticizer is a stearate of glycerol, then the recited glass transition temperature of the mixture being no more than 20°K below the glass transition temperature of the thermoplastic acrylic plastic A is necessarily inherent.

In reply, it is only with the present disclosure as a guide that one skilled in the art would know to pick both the film-forming polymer and plasticizer in Burguiere et al to obtain this temperature relationship. Note that Burguiere et al discloses film-forming polymers other than Eudragit-brand polymers, and plasticizers other than stearates of glycerol. Indeed, GMS *per se* is not disclosed by Burguiere et al.

Regarding the Examiner's discussion of Mueller et al in the Advisory Action, Mueller et al and its deficiencies have been addressed above.

Claim 29 is separately patentable, since the combination of Burguiere et al and Mueller et al neither discloses nor suggests the composition according to Claim 25, wherein GMS is present in an amount at least as high as 33.3 wt.%, based on 100% by weight of A and B. Note that Burguiere et al discloses a maximum plasticizer content of 20 wt%.

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

Issue (D)

The rejection of Claims 25-29 under 35 U.S.C. § 103(a) as unpatentable over Staniforth et al in view of Mueller et al, is respectfully traversed. Staniforth et al discloses a sustained-release formulation comprising an active ingredient, an augmented microcrystalline cellulose which possesses excellent compressibility, and a sustained-release carrier (column

5, lines 4-15). Staniforth et al discloses further that one or more compressibility augmenting agents may be present (column 6, lines 26-31). Staniforth et al discloses a wide variety of compressibility augmenting agents, beginning at column 7, line 64, among which are a relatively long list of surfactants, including GMS (column 11, line 33). Staniforth et al further discloses Eudragit brand polymers as applicable sustained release carriers (column 20, lines 29-31). The relatively large numbers of applicable combinations of ingredients in Staniforth et al is so large that it would not have even been *prima facie* obvious to choose the combination of a Eudragit brand polymer and GMS, forgetting about all the other limitations of the present claims. See *In re Baird*, 29 USPQ 2d 1550 (Fed. Cir. 1994).

Mueller and its deficiencies have been discussed above.

Without the present disclosure as a guide, one skilled in the art would not have combined Staniforth et al and Mueller et al. Moreover, even if combined, the result would not have been the presently-claimed invention. See *Baird*, *supra*. Nor could one skilled in the art have arrived at the presently-recited requirement that the glass transition temperature of the mixture of thermoplastic acrylic plastic and GMS be no more than 20°K below the glass transition temperature of the thermoplastic acrylic plastic *per se*, or have predicted the importance of both the hot-melt temperature and relative amounts of GMS present, as demonstrated in the above-discussed first Assmus Declaration and supplemental first Assmus Declaration.

In the Advisory Action, the Examiner relies on *In re Sivaramakrishnan*, 213 USPQ 441 (CCPA 1982) as supporting his reliance on Staniforth et al. *Sivaramakrishnan* is clearly inapposite since in *Sivaramakrishnan*, the claimed invention was a moldable aromatic polycarbonate consisting essentially of an aromatic polycarbonate resin, and either cadmium 2-ethylhexanoate or cadmium laurate. The prior art disclosed the combination of an aromatic polycarbonate resin and various listed salts, one of them being cadmium laurate. In

Sivaramakrishnan, there were approximately 90 salts listed, and thus, there were approximately 90 possible combinations of resin and salt. In Staniforth et al, on the other hand, the number of possibilities is countless. A case more in point is *In re Arkley*, 172 USPQ 524, 526 (CCPA 1972), which states in pertinent part:

> [R]ejections under 35 U.S.C. 102 are proper only when the claimed subject matter is identically disclosed or described in "the prior art." Thus, for the instant rejection under 35 U.S.C. [102(b)] to have been proper, the . . . reference must clearly and unequivocally disclose the claimed [subject matter] or direct those skilled in the art to the [subject matter] without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. Such picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness which may arise from the similarity of the subject matter which he claims to the prior art, but it has no place in the making of a 102, anticipation rejection.
>
> Indeed, even picking and choosing would not support an obviousness rejection herein.

Again, see *Baird*, *supra*.

Claim 29 is separately patentable, since the combination of Staniforth et al and Mueller et al neither discloses nor suggests the composition according to Claim 25, wherein GMS is present in an amount at least as high as 33.3 wt.%, based on 100% by weight of A and B. Note also that the amount of Staniforth et al's surfactant appears to be added in an amount (column 13, line 37ff) much lower than recited herein

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

Issue (E)

The rejection of Claims 25-29 under 35 U.S.C. § 103(a) as unpatentable over JP '317, Rudnic et al, and Pöllinger et al in view of Petereit et al, Burguiere et al and Mueller et al, is respectfully traversed. JP '317 discloses pharmaceutical tablets or granules coated with a composition comprising a particularly specified polymer, a water-insoluble non-ionic

surfactant solid at ambient temperature, and a higher fatty acid solid at ambient temperature. GMS is disclosed as a preferred non-ionic surfactant. No amounts of non-ionic surfactant are disclosed. Rudnic et al discloses a sustained-release pharmaceutical composition comprising a highly soluble pharmaceutical agent in a pharmaceutical carrier comprising a hydrophilic polymer, such as a Eudragit brand polymer (column 2, lines 50-61) in a hydrophobic matrix, including GMS (column 2, line 62 ff). While the Examiner relies on Example 1 therein, which contains a matrix component in an amount of 20%, other examples, i.e., Examples 2 and 3, which specifically discloses GMS, contain GMS in an amount of 5%. There is no disclosure or suggestion to use GMS in an amount as high as 20% in Rudnic et al. Pöllinger et al discloses a flavor-masked pharmaceutical composition in the form of microcapsules prepared using specific coatings (column 3, lines 23-27). While Pöllinger et al lists various film-forming agents known in the art (column 4, line 45 ff), only some Eudragit brand, but not all Eudragit brand, polymers may be used in Pöllinger et al (column 4, line 66 ff). For example, Eudragit brand polymers that are cationic did not produce the desired results (column 5, line 44 ff). Pöllinger et al discloses further that plasticizers may be included, among which are GMS (column 5, lines 49-57, especially line 53). None of the examples in Pöllinger et al contain GMS and thus, no percentage range therefore is disclosed.

The disclosures and deficiencies of Petereit et al, Burguiere et al, and Mueller et al have been discussed above.

One skilled in the art would not have combined the above-applied prior art without the present disclosure as a guide. Moreover, even if combined, the result would still not be the presently-claimed invention. Nor could one skilled in the art have arrived at the presently-recited requirement that the glass transition temperature of the mixture of thermoplastic acrylic plastic and GMS be no more than 20°K below the glass transition temperature of the thermoplastic acrylic plastic *per se*, or have predicted the importance of

both the hot-melt temperature and relative amounts of GMS present, as demonstrated in the above-discussed first Assmus Declaration and supplemental first Assmus Declaration.

In the present Office Action, it is clear that the Examiner has taken bits and pieces from the disclosures of the applied prior art, that he believes supports his position, while ignoring disclosure that does not. Clearly, the combination of the six-applied references could be stated to suggest almost anything, but it is only with the present disclosure as a guide that one skilled in the art would come up with the present invention.

In the Advisory Action, the Examiner has continued to take bits and pieces from the disclosures of the prior art that supports his position, while ignoring other disclosure. In addition, it is clear that the rejection is based on the Examiner's incorrect interpretation of Petereit et al, discussed under Issue (A), *supra*.

Claim 29 is separately patentable, since the combination of JP '317, Rudnic et al, Pöllinger et al, Petereit et al, Burguiere et al and Mueller et al neither discloses nor suggests the composition according to Claim 25, wherein GMS is present in an amount at least as high as 33.3 wt.%, based on 100% by weight of A and B.

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

Issue (F)

The rejection of Claims 25-29 under 35 U.S.C. § 103(a) as unpatentable over Mueller et al in view of Petereit et al and Burguiere et al, is respectfully traversed. The disclosures and deficiencies of each of these references have been discussed above. First of all, Petereit et al do not disclose the function of the GMS therein. Burguiere et al discloses a maximum of 20% by weight of plasticizer, and preferably a maximum of 15%. A plasticizer is not even required in Mueller et al. Without the present disclosure as a guide, one skilled in the art

would not have combined the above-applied references. Moreover, even if combined, the result would still not be the presently-claimed invention. Nor could one skilled in the art have arrived at the presently-recited requirement that the glass transition temperature of the mixture of thermoplastic acrylic plastic and GMS be no more than 20°K below the glass transition temperature of the thermoplastic acrylic plastic *per se*, or have predicted the importance of both the hot-melt temperature and relative amounts of GMS present, as demonstrated in the above-discussed first Assmus Declaration and supplemental first Assmus Declaration.

In the Final Office Action, the Examiner does not even respond to the above arguments, but simply refers to rebuttals of the other rejections. If those rebuttals apply to the present rejection, it is not clear why the present rejection was even made. But, since it was made, and involves a different combination of references, Applicants deserve the Examiner's specific reasoning in rebuttal of the above-discussed arguments regarding this rejection.

In the Advisory Action, the Examiner notes that Mueller et al discloses the inclusion of plasticizers (column 3, line 6) but, as Applicants have stated above, Mueller et al do not require plasticizers and thus, there would be no reason for one skilled in the art to add such a plasticizer for the melt extrusion-processed solid depot drug of Mueller et al, let alone in an amount as high as 20% based on the water-insoluble poly(meth)acrylate component of Mueller et al.

As to the Examiner's finding that when the blend of acrylic polymer and plasticizer of Mueller et al uses the GMS of Petereit et al or Burguiere et al, the above-discussed "at most 20°K temperature" limitation inherently results, it is only with the present disclosure as a guide that one skilled in the art would know to pick both a particular acrylic polymer of Mueller et al and the GMS of Petereit et al or Burguiere et al, to obtain this temperature relationship.

Claim 29 is separately patentable, since the combination of Mueller et al, Petereit et al and Burguiere et al neither discloses nor suggests the composition according to Claim 25, wherein GMS is present in an amount at least as high as 33.3 wt.%, based on 100% by weight of A and B.

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

IX. CONCLUSION

For the above reasons, it is respectfully requested that all the rejections still pending in the Final Office Action be REVERSED.

Respectfully submitted,

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APPENDIX

CLAIMS ON APPEAL

Claim 25: An oral or dermal medicinal composition containing a pharmaceutical active substance and a thermoplastic coating and binding agent prepared by a method of applying a thermoplastic coating and binding agent in a hot-melt liquid state at a temperature of 100-150°C to said oral or dermal medicinal composition, followed by cooling to solidify the thermoplastic coating and binding agent, wherein said thermoplastic coating and binding agent consists essentially of a mixture of, based on 100% by weight of A and B:

A) a thermoplastic acrylic plastic with a melting temperature above room temperature and below 200°C, a glass transition temperature below 120°C, and a melt viscosity of 1,000 to 1,000,000 Pa-sec at the melting temperature; and

B) 20-50 wt.% of glycerol monostearate, wherein the glass transition temperature of the mixture is no more than 20°K below the glass transition temperature of component A.

Claim 26: The composition according to Claim 25, wherein the thermoplastic acrylic plastic A is a copolymer of esters of acrylic and/or methacrylic acid.

Claim 27: The composition according to Claim 25, wherein the thermoplastic acrylic plastic A is a copolymer of alkyl esters of acrylic and/or methacrylic acid and functional comonomers with covalently bound cationic groups.

Claim 28: The composition according to Claim 25, wherein the thermoplastic acrylic plastic A is a copolymer of 5 to 99 wt% alkyl esters of acrylic and/or methacrylic acid and 95

to 1 wt% aminoalkyl esters or aminoalkylamides of acrylic and/or methacrylic acid or their salts or quaternary ammonium compounds thereof.

Claim 29: The composition according to Claim 25, wherein the glycerol monostearate is present in an amount of 33.3-50 wt.%, based on 100% by weight of A and B.